



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,367	09/30/2003	Liang Jiang	132347-1	5979
6147 7590 07/13/2009 GENERAL ELECTRIC COMPANY GLOBAL RESEARCH PATENT DOCKET RM. BLDG. K1-4A59 NISKAYUNA, NY 12309				
EXAMINER ROE, JESSEE RANDALL				
ART UNIT 1793		PAPER NUMBER		
NOTIFICATION DATE 07/13/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ldocket@crd.ge.com
rosssr@crd.ge.com
parkskl@crd.ge.com

Continuation Sheet

Response to Declaration Under 37 CFR §1.132

The Declaration under 37 CFR 1.132 filed 26 June 2009 is insufficient to overcome the rejection of claims 1, 2, 4, 6, 8, 19, 22 and 23 under 35 U.S.C. 103(a) as being unpatentable over Hamada (JP 11-217644), claim 10 under 35 U.S.C. 103(a) as being unpatentable over Hamada (JP 11-217644), and further in view of Twigg et al. (US 3,723,108), and claims 1, 2, 4, 6, 8, 10, 19 and 22-23 under 35 U.S.C. 103(a) as being unpatentable over Wheaton (US 3,561,955) as set forth in the last Office action because:

First, the Examiner notes that Hamada (JP '644) discloses 0.01 to 3 weight percent aluminum, 0 to 2 weight percent titanium, 0 to 2 weight percent, 18 to 25 weight percent chromium, 0 weight percent zirconium, 17 to 23 weight percent cobalt, 0 to 10 weight percent tungsten, with the balance being nickel whereas the instant invention teaches an alloy comprising about 1.5 to about 4.5 weight percent aluminum, about 1.5 to about 4.5 weight percent titanium, about 0.8 to about 3 weight percent niobium, about 14 to about 28 weight percent chromium, up to about 0.2 weight percent zirconium, about 10 to about 23 weight percent cobalt, about 1 to about 3 weight percent tungsten, with the balance being nickel. Applicant compared samples A and B (Table 1 of page 4 of the Declaration) and declares that these samples are within the scope of the instant invention, with samples falling outside the scope of the instant invention, but within the scope of Hamada (JP '644). The Examiner notes the following issues with this comparison: (1) Although Sample A has cobalt content within the scope of the instant

invention and Hamada (JP '644), Sample B is within the scope of the instant invention but not within the scope of Hamada (JP '644) and (2) Alloy A contains no tungsten whereas Alloy B contains 2 weight percent tungsten. Therefore, a demonstration of the criticality of the aluminum:titanium ratio has not been provided since the Applicant is changing multiple variables of Alloys A and B (i.e. the cobalt content, the tungsten content, and the aluminum:titanium ratio) and not only changing the aluminum:titanium ratio.

Second, the Examiner notes that Wheaton ('955) discloses about 2.5 to 4.75 weight percent aluminum, about 1 to 3 weight percent titanium, about 0.5 to 2.5 weight percent niobium, about 14 to 18 weight percent chromium, about 0.01 to 0.20 weight percent zirconium, about 5 to 20 weight percent cobalt, about 2 to about 4.5 weight percent tungsten, with the balance being nickel whereas the instant invention teaches an alloy comprising about 1.5 to about 4.5 weight percent aluminum, about 1.5 to about 4.5 weight percent titanium, about 0.8 to about 3 weight percent niobium, about 14 to about 28 weight percent chromium, up to about 0.2 weight percent zirconium, about 10 to about 23 weight percent cobalt, about 1 to about 3 weight percent tungsten, with the balance being nickel. Applicant compared samples A and B (Table 1 of page 4 of the Declaration) and declares that these samples are within the scope of the instant invention, with samples falling outside the scope of the instant invention, but within the scope of Wheaton ('955). The Examiner notes the following issues with this comparison: (1) Samples A and B have a chromium content within the scope of the instant invention, but neither Sample A nor B have a chromium content within the scope disclosed by

Wheaton ('955); (2) Samples A and B have an aluminum content within the scope of the instant invention, but neither Sample A nor B have an aluminum content within the scope disclosed by Wheaton ('955); (3) although zirconium is not required in the instant invention, Wheaton ('955) requires 0.01 to 0.20 weight percent zirconium, which is not specified. Therefore, a demonstration of the criticality of the aluminum:titanium ratio has not been provided since the Applicant is changing multiple variables of Alloys A and B (i.e. the chromium content, the aluminum content, and the aluminum: titanium ratio) and not only changing the aluminum:titanium ratio in addition to the lack of specifying the zirconium content.

Response to Arguments

Applicant's arguments filed 26 June 2009 have been fully considered but they are not persuasive.

First, the Applicant primarily argues that the most recent Office Action does not appear to reflect the pendency of claims 11 and 12 and clarification is requested from the Examiner.

In response, claims 11 and 12 were indicated as withdrawn from consideration on page 2 of the Office Action of 23 April 2009.

Second, the Applicant primarily argues that the cited reference to Hamada (JP '644) contains no suggestion of the very specific utility of the careful balance between creep strength, "weldability", and fatigue cracking resistance.

In response, since Hamada (JP '644) discloses substantially the same

composition as that of the instant invention, these properties would be expected. MPEP 2112.01 I.

Third, the Applicant primarily argues that while Wheaton ('955) describes particular titanium-aluminum levels to promote the gamma prime phase, no suggestion is made of Ti+Al proportions which minimize or prevent formation of the eta phase.

In response, the Examiner notes that Wheaton ('955) discloses substantially the same composition (including titanium and aluminum) as that of the instant invention and therefore minimization or prevention of the eta phase would be expected. The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of ranges is the optimum combination of percentages. MPEP 2144.05 II.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jesse Roe whose telephone number is (571)272-5938. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art
Unit 1793

JR